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YUKI BASKETRY

BY

ISABEL T. KELLY

UNIVERSITY OF CALIFORNIA PUBLICATIONS IN AMERICAN ARCHAEOLOGY AND ETHNOLOGY

Volume 24, No. 9, pp. 421–444, plates 120–127, 5 figures in text

UNIVERSITY OF CALIFORNIA PRESS
BERKELEY, CALIFORNIA
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Issued November 22, 1930

University of California Press
Berkeley, California

Cambridge University Press
London, England

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INTRODUCTION

The Yuki are a relatively small Californian group comprising an independent linguistic stock which is wedged in between Hokan (Pomo), Penutian (Wintun), and Athapascan-speaking peoples. The Yuki may be divided as follows: Yuki proper, Coast Yuki, Huchnom, and Wappo. The latter group lies isolated to the south, separated by some 40 miles of Pomo territory. This is reflected in their culture which is, according to all accounts, indistinguishable from that of the Pomo. The Wappo are the only Yuki division making feather-decorated baskets—a trait undoubtedly due to Pomo influence. As will be seen later, Pomo proximity is likewise apparent in Huchnom culture, at least in the realm of basketry.

This paper deals primarily with the basketry of the Yuki proper and, to a very minor extent, with that of the Huchnom. As Yuki basketry is scantily represented in museum collections and has been inadequately described in publications, it seems worth while to record such data as are ascertainable from the small collection in the University of California Museum of Anthropology.

This collection consists of 98 baskets, of which 78 are coiled and 20 twined. One of the former and two of the latter are attributed to the Huchnom.[1] The Yuki material was originally somewhat larger, but it was necessary to eliminate doubtful specimens, such as certain ones from Round valley provisionally classed as Yuki. Unless otherwise stated, the remainder may be regarded as of straight Yuki provenience.

The proportion of coiled and twined basketry given above indicates the relative importance of the two techniques. Coiling was used for cooking and food baskets, and except for five specimens the ware was decorated. The twining was in general exceedingly crude, undecorated, and associated principally with seed beaters, hoppers, and sifters.

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[1] An example of Huchnom coiling is illustrated in Mason, O. T., Aboriginal American Basketry, USNM-R, 1902:459, 1904.

COILED WARE

Use and Shapes

Coiled baskets show evidence of the culinary uses mentioned above. There are three principal forms—an open dish or bowl with sides slightly flaring; a bowl with more or less straight rising sides; and, less frequently, a rather smaller type with incurved sides (i.e., convex in cross-section).

Materials

The materials of 75 of the 78 Yuki coiled baskets have been analyzed by Miss Ruth Earl Merrill. Her unpublished data are on file in the Museum and may be summarized as follows:

Foundation material:

48 dogwood (*Cornus* sp.)
13 redbud (*Cercis occidentalis*)
8 dogwood and redbud
4 willow (*Salix* sp.)
1 redbud sapwood
1 hazel (*Corylus rostrata* var. *californica*)

Sewing material:

43 redbud wood
22 redbud sapwood
9 redbud
1 redbud root

The distinction between the first three is not entirely clear, but they are given here in accordance with Miss Merrill's entry. At all events, the sewing material is always some form or other of redbud.

A somewhat similar situation obtains as regards the pattern-forming element. Of the 71 analyzed cases of decorated basketry, 69 have the pattern produced by sewing in redbud bark. In the other two instances, redbud sapwood and redbud (?) supply the design element. The redbud bark is a dark reddish brown color and contrasts nicely with the natural buff-colored background. Apparently little attempt was made to alter the natural color of the bark by dyeing, as only two such instances were observed.

Start of the Coil

There is nothing especially distinctive about beginning a Yuki coiled basket. In the majority of cases, pliable material is used at first, the heavier rods and splints not being introduced until several coils have been sewn. Such a beginning is rosette-shaped in external appearance, and often there is a hole of considerable size in the center. In one or two instances, this central opening has been plugged with a strand of weft fiber, which has been knotted, thrust through the hole, knotted on the other side, and trimmed off close.

When the start is more intricate, the external appearance is that of crossed or diagonally lashed weft elements enclosed within a square, superficially resembling that figured by Barrett[2] for Pomo twining.

Progress of the Coil; Interlocking of Stitches

As one looks at the interior bottom, Yuki coiling is seen to proceed in counterclockwise fashion. In other words, progress is left to right with the exterior or convex surface toward the worker. Stitches do not interlock with those of the preceding row. They are frequently but not consistently bifurcated by those of the succeeding coil, and this must therefore be regarded as a more or less accidental feature, not one consciously produced. Its random character is further suggested by the fact that the stitches on the interior of the basket are much more frequently split than those on the exterior.

Structure of the Coil

The structure of the coil foundation may be summarized as follows:

	Baskets	
1 rod, several welts	31	(40%)
2 rods, single welt	1	
2 rods, several welts	11	(14%)
3 rods	30	(38%)
Welts only	2	
Variable	3	
	78	

[2] Pomo Indian Basketry, UC–PAAE, 7: pl. 15, fig. 1, 1908.

There is a marked preference for the single rod with multiple welts and for the three-rod foundation. When splints or welts occur otherwise than in association with two rods, they usually lie vertically and may entirely enclose the rod. In some poorly made baskets, the principal foundation may be of welts with rods more or less sporadically introduced. These baskets are listed above as variable.

With the three-rod foundation, one of the rods is often split in the sewing, automatically producing a two-rod, multiple-welt foundation. It is usually possible to determine whether this latter structure has been produced automatically or voluntarily. It seemed intentional in 11 cases (14 per cent).

Fineness

None of the coiling is especially fine, at least as compared with Pomo products. Ninety-five per cent of the baskets show five or six coils to the inch, and 82 per cent run from eight to twelve stitches to the linear inch. It is rare to find more than twelve stitches, but one instance of sixteen stitches was noted. Some few baskets are exceedingly coarse, averaging only three or four stitches to the inch (pl. 124*d*). In these, of course, the foundation material is clearly visible between stitches.

Rim Finish

One feature not in keeping with the mediocrity of Yuki coiling is the neat manner in which the coil is finished at the rim of the basket. An inch or so before the termination the coil is thinned and the overcasting continued. When the end is reached, the sewing is reversed, running back on itself for a short distance. The result is a sort of herringbone effect when viewed from above. Unfortunately this feature does not show on any of the photographs. This method of finishing the coil is not characteristic of the Pomo nor of any of the other Californian groups represented in the Museum. Discounting imperfect specimens, about 50 per cent of the Yuki baskets have the herringbone finish. It does not seem to be correlated with the finer ware but occurs more or less indiscriminately.

Other methods of finishing the coil are found. It may be thinned and simply whipped to the row below, as was usual with the Pomo, or it may be chopped off abruptly without any attempt to graduate the break. A good many of the specimens are broken or raveled about the rim, and it is impossible to tell what finish they may have had.

Design Disposal

As was mentioned at the outset, all but 5 of the 78 coiled baskets show some attempt at decoration. The various types of decoration fall rather easily into three groups, according to the disposal of the pattern. As one looks at the basket, side view, the design may be placed vertically, horizontally, or diagonally.

The vertical disposal often consists of a column of interpenetrating isosceles triangles, which are repeated at stated intervals (pl. 125*e*). The other motifs are rather nondescript (see pls. 120*c* and 121*d*).

Horizontal decoration is of two types. One relatively frequent type, occurring in 31 of the 73 cases of decorated ware, consists of a series of simple horizontal bands which are continued wholly or partly down the sides. The stripes may be continuous, or they may be bunched in definite units with a gap between. The stripe unit so formed comprises several bands, usually three, but frequently two. The number of bands composing a unit is normally constant on a single basket.

When there is but a single stripe unit, it tends to be placed part way down the side and not at the rim. Of those baskets with several band series, about 50 per cent have three such units. When there is more than one group, one set ordinarily occurs at the rim.

A more elaborate type of horizontal decoration, of which there are nine examples, consists of definite patterns horizontally arranged. These are usually horizontal bands with a step or some such break (pls. 120*b*, 123*f*). A horizontal pattern is sometimes formed by filling the space between two simple bands with a series of recurrent rectangular figures (fig. 2*e*).

Diagonally placed patterns can be subdivided into the simple diagonal, the intersecting diagonal, and the diamond diagonal. The first type is more or less self-explanatory. The design proceeds diagonally across the side of the basket and consequently is spiral, relative to the center bottom (fig. 2*f*). This sort of diagonal often consists of various forms of a stepped diagonal line, or of superimposed, overlapping quadrilaterals (pl. 121*a*). The simple diagonal arrangement occurs ten times.

In the intersecting diagonal, the pattern proceeds diagonally across the side of the basket, intersecting at the top and bottom with a

pattern running diagonally in the opposite direction. The intersecting diagonal might also be described as a series of contiguous V figures with the open end of the V on the rim of the vessel. The intersecting diagonal occurs six times in all; the associated motifs occur as follows: one instance each of a plain, solid color diagonal (fig. 3*c*), a stepped diagonal, a diagonal of irregular zigzag form; and three instances of the quail tip.

The diamond diagonal is simply a more intricate phase of the intersecting diagonal. With this, the V-shaped figures run from the bottom as well as from the rim, the apices meeting halfway down the side of the basket. This intersection naturally forms a series of superimposed V figures which, when contiguously placed, outline a diamond-shaped enclosure. This form of the diagonal occurs seven times and is almost invariably composed of a series of stepped quadrilaterals (pl. 124*h*).

The disposition of coiled basketry decoration may be summarized as follows:

	Baskets
Vertical	12
Plain horizontal	31
Pattern horizontal	8
Simple diagonal	9
Intersecting diagonal	6
Diamond diagonal	7
Undecorated	5
	78

Relation of Design to Shape of Basket

A strong correlation between design and shape of the basket might be expected but such seems not to be the case. Horizontal banding, the most frequent decorative device, is found on all shapes represented. Baskets with sharply flaring sides tend to have the horizontal design arrangement; the intersecting diagonal is found principally on vessels of round or incurving sides. Aside from these two tendencies the associations of shape and design are not marked.

In practically all cases the design is present on the bottom as well as the sides regardless of whether the basket is deep or plate-like. The bottom design is often dimmed, if not obliterated, by wear.

Repetition of Design Elements

With the exception of horizontally disposed bands, the design may be repeated at stated intervals around the basket. With the Yuki, the repetition is from two to eight times, but most units are repeated either three or four times. There is an equal fondness for the even and the uneven number of divisions.

Certain tiny, discrete elements, apparently having no connection with the principal design, are sometimes scattered here and there over the surface. They may consist of a stray half-inch length, a tiny cross, or an H-shaped figure, as in plates 120*b*, 124*c*.

Gap in Joining of Horizontal Bands

Because of the spiral construction of the basket, horizontal bands never join completely, but the end of the band is one coil above the start. An intentional gap or break, as in plate 123*d*, is frequently left, however, between the ends of encircling bands. The conventional explanation for this well-known phenomenon is magico-religious. Be that as it may, the break occurs 28 times, or in 72 per cent of the baskets which have horizontal designs and hence might possibly show the feature.

Design Treatment of the Rim

There is no instance of a composite rim design.[3] In fact, the design often runs directly to the edge of the basket. This is the case with the bulk of the vertically disposed designs and with about half of the various types of diagonal decoration.

On the other hand, the last few coils may constitute some sort of finish. With horizontally placed decoration the basket is usually finished with 1–5 rows of solid color or with alternate rows of each color. In other cases the last row may be of solid color, or it may consist of sectors of each color.

A pleasing variation is obtained when the red and cream stitches are alternated as in plate 120*d*. In such instances the white strand, for example, instead of catching the foundation between every stitch

[3] As with a Chumash specimen figured by Kroeber, A. L., Basket Designs of the Mission Indians of California, AMNH-AP, 20: pl. 6, fig. 2, 1922.

of the preceding coil, catches it between every other stitch, alternating with the brown sewing strand. In such cases the stitches of the final row have a decided slant as compared with those on the body of the basket (fig. 1). The same situation may obtain when the sewing elements are of the same color. In one case, for example, two white

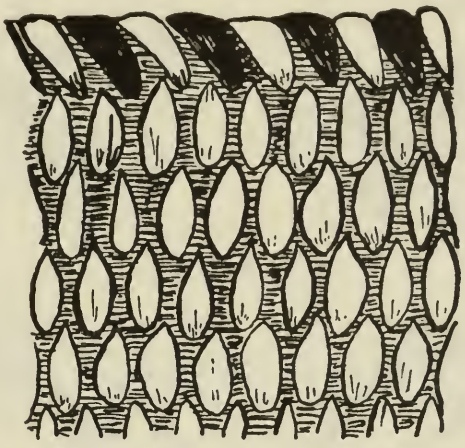

Fig. 1. Rim finish showing slanting stitches.

strands, alternating as above described, are used in sewing the last row. Although there is no change in color, the final row has a slant which contrasts pleasantly with the preceding rows. This is not well illustrated in any of the plates and is not a particularly marked characteristic of Yuki work.

Motifs and Designs

Block, mottled, and negative patterns are almost lacking. Two examples of the first are shown in plates 121*b* and *f*. All-over patterns in the form of mottled designs do not occur, although the surface of the basket is often completely covered by horizontal bands, by stepped parallel diagonals (fig. 3*a*) or, as in one case, by a series of overlapping parallelograms (fig. 3*b*) arranged in diagonal rows of alternating brown and white. The only two instances of negative design are shown in plate 121*e* and in figure 3*d*.

The sum total of Yuki motifs is indeed small, as about half of the decorated baskets have only plain horizontal stripes. The rectangle, as the component element in the stepped diagonal (pl. 124*h*), is probably the most frequent motif. It is found in other capacities, however, principally as a recurrent element between horizontal bands (fig. 2*e*).

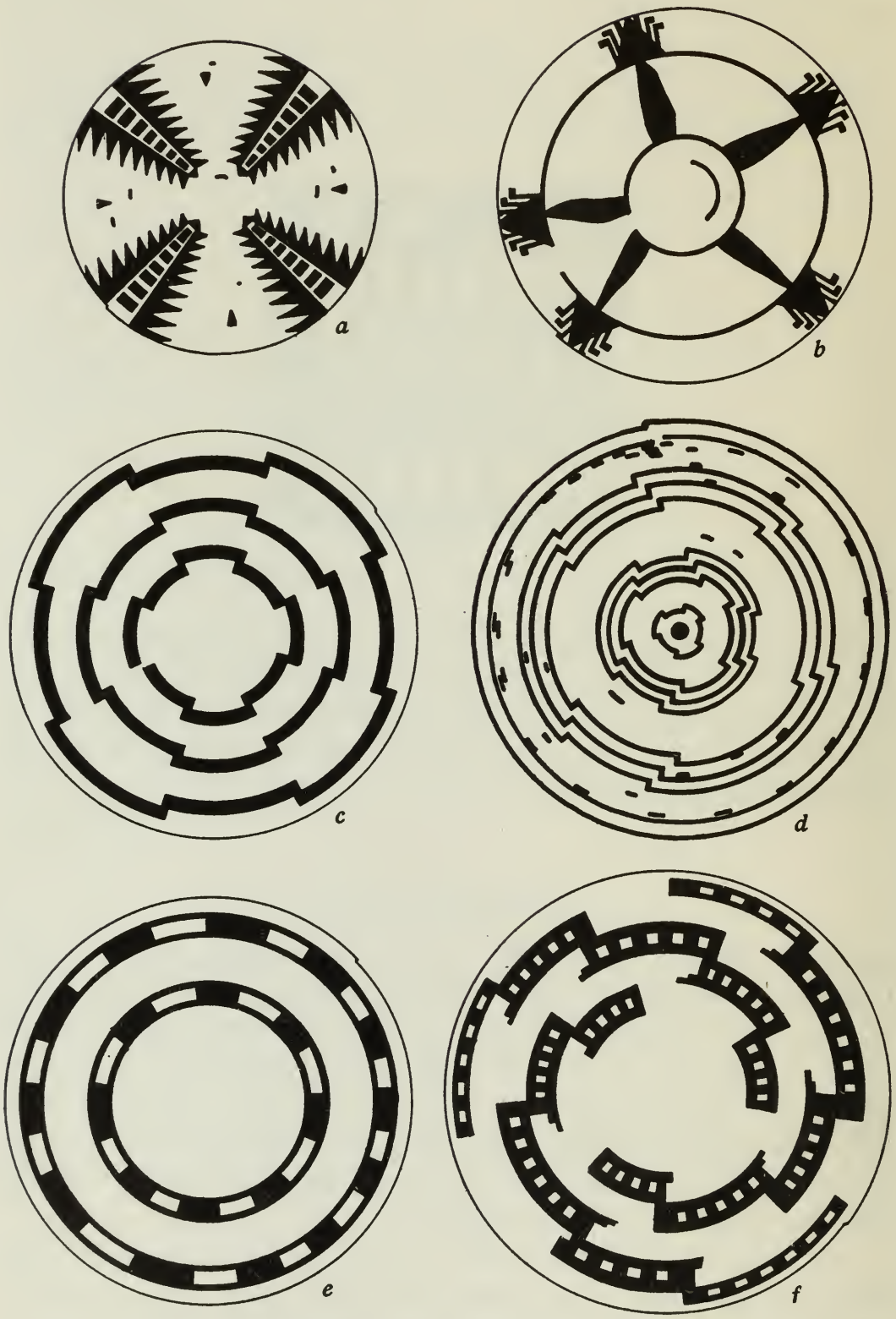

Fig. 2. Designs on coiled baskets, bottom view. Spec. nos., *a*, 11921; *b*, 12037; *c*, 11879; *d*, 11963; *e*, 12006; *f*, 12043. Sketch by Mr. H. S. Darlington.

The triangle is next in frequency. It is usually an isosceles triangle and is found with vertically placed designs where it occurs in interpenetrating series.

The zigzag is rare but may be disposed vertically or diagonally, as in plates 120*d* and 122*e*. The conventional even-armed zigzag does not occur at all unless one so regards the intersecting diagonal patterns (pl. 124*a*). A jagged diagonal which might be considered a zigzag is

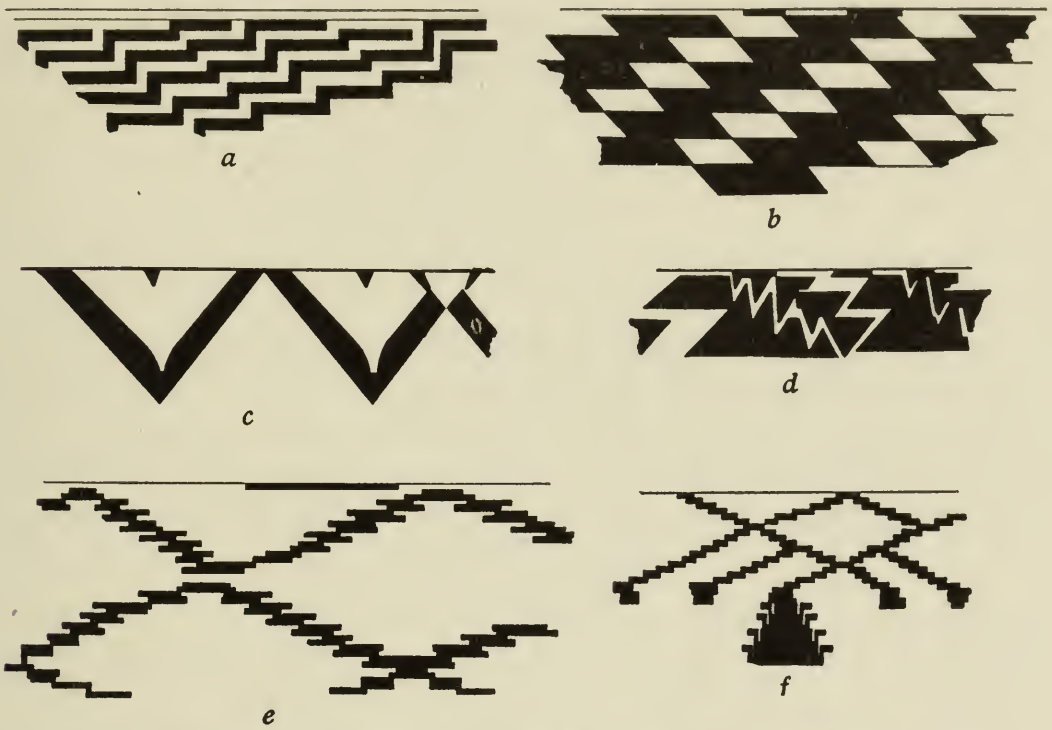

Fig. 3. Designs on coiled baskets, side view. Spec. nos., *a*, 11898; *b*, 12009; *c*, 11937; *d*, 12057; *e*, 12027; *f*, 11965. Sketch by Mr. H. S. Darlington.

shown in plate 124*c*. It really consists of a stepped arrangement of isosceles triangles stood on end, the apex of each pointing to one side and in contact with the base of the triangle immediately below and to one side.

The only other design element of sufficient frequency to be cited is the so-called quail tip. This motif is of unusual interest and will be discussed later.

Relation of Yuki Coiling to that of Other Groups

Perhaps the most noticeable thing about Yuki basketry is its nondistinctive character, particularly in the design elements employed, for in most instances one could point out similar, if not exact, prototypes from baskets of neighboring tribes.

As a matter of fact, there is only one motif which seems peculiar to the Yuki. It occurs but once in the collection and is figured in

plate 120*c*. According to the owner, the basket is said to be of a type used only by captains (?) for the ceremonial serving of food.

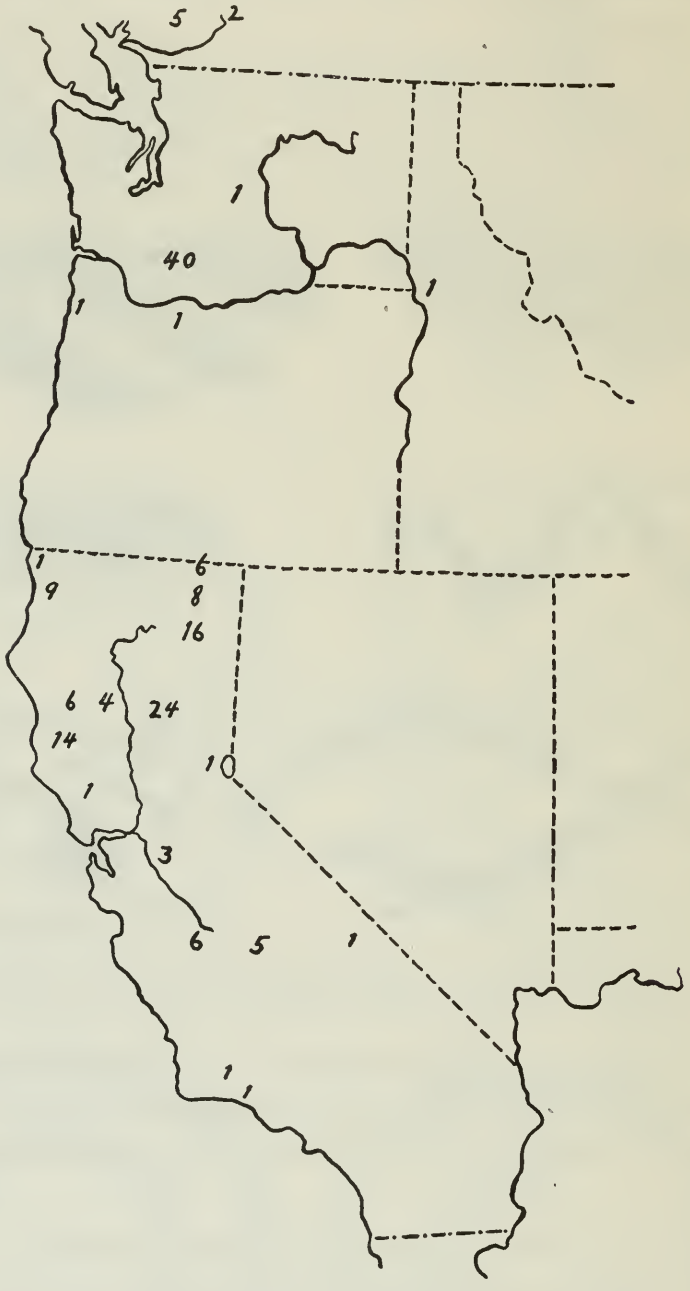

Fig. 4. Sketch map showing distribution of quail tip design. Figures represent the number of absolute cases observed. Three instances have not been entered; they are from the Salish region but of unknown local provenience. The distribution is as follows: 2 Thompson; 5 Lillooet; 1 Quinaielt; 40 Klikitat; 1 Yakima; 1 Wasco; 1 Nez Perce; 1 Tolowa; 9 Yurok, Karok, Hupa; 4 Wintun; 6 Modoc, Klamath; 8 Achomawi; 16 Atsugewi; 24 Maidu; 1 Washo; 6 Yuki; 14 Pomo; 1 Wappo; 3 Miwok; 6 Yokuts; 5 Kern and Inyo region (Yokuts or Western Mono); 1 Koso; 1 Santa Barbara; 1 Mission Santa Inez.

It is of moderate fineness—5 coils and 9 stitches the inch—and has a 2-rod, multiple-splint foundation. The motif is repeated four times on the bottom and eight times on the side. The design probably bears

some relation to the design on the basket which is shown immediately above on the same plate.

Interpenetrating triangles, commonly associated with vertically arranged designs, are found among the Salish, Washo, Maidu, Pomo, Mono, Yokuts, and probably others. The design shown in figure 3*c* is found among the Pomo, Maidu, Klikitat, and Walla Walla, while the design illustrated in figure 2*f* is almost identical with designs on Maidu and Wintun baskets. The only Huchnom coiled basket in the collection has the rather intricate design shown in figure 3*d* which is strongly suggestive of that on a Pomo feathered basket.[4] The negative design shown in plate 121*e* and mentioned previously is reminiscent of two Pomo specimens figured by Mason.[5]

One could cite many similar instances. One design element which the Yuki share with other tribes is commonly called the quail tip, quail plume, grasshopper leg, or lizard leg. As indicated on the accompanying map (fig. 4), it is of considerable distribution, occurring widely in California and in the Plateau region. This particular motif Boas[6] regards as a case of undoubted historical connection. The area intervening between California and the northern region is blank; but few data of any sort are known from this district.[7]

One especially interesting point to be noted is that this quail plume motif is not confined to the coiling technique, as it frequently occurs in northwestern California, where twining is practiced to the exclusion of coiling.

The design appears in two principal forms—that of an inverted L (fig. 5*a–f*) and that of a stem with a right-angled triangle as a foot (fig. 5*g–i*). The occurrence of these two types has been traced as far as possible[8] and, all told, 102 instances of the inverted L type were

[4] Spec. no. 1–3042.

[5] *Op. cit.*, pl. 25, large center basket, and pl. 29, lower basket.

[6] Boaz, Franz, Primitive Art, 180 (Oslo, 1927).

[7] The British Museum has since furnished the photograph of a twined basket with a quail tip design, said to come from Umpqua, Yamhill county, Oregon (Freer collection, 1900–09). The Wishram must also be added to the above distribution by virtue of Spier and Sapir's recently published paper (Wishram Ethnography, UW-PA, 3:194, fig. 4, pl. 4, 1930).

[8] These data are based primarily on specimens in the University of California Museum of Anthropology, the Oakland Public Museum, and upon illustrations in Mason, *op. cit.;* Haeberlin, Teit, and Roberts, Coiled Basketry in British Columbia and Surrounding Region, BAE-R, 41, 1928; and Dixon, R. B., Basketry Designs of the Indians of Northern California, AMNH-B, 17:1–32, 1902. More or less isolated cases were taken from Spinden, H. J., The Nez Perce Indians, AMNH-M, 2: pl. 6, 1908; James, G. W., The Basket, nos. 1, 2, 3, 1903; Rogers, D. B., Prehistoric Man of the Santa Barbara Coast (1929); and Farrand L., Basketry Designs of the Salish Indians, AMNH-MJ, 2: pl. 23, 1900.

found. Of these 102, 91 were coiled and 11 twined. A chance association between the coiled technique and this particular form of quail tip would be 63 cases. There is therefore a definite correlation between the two.

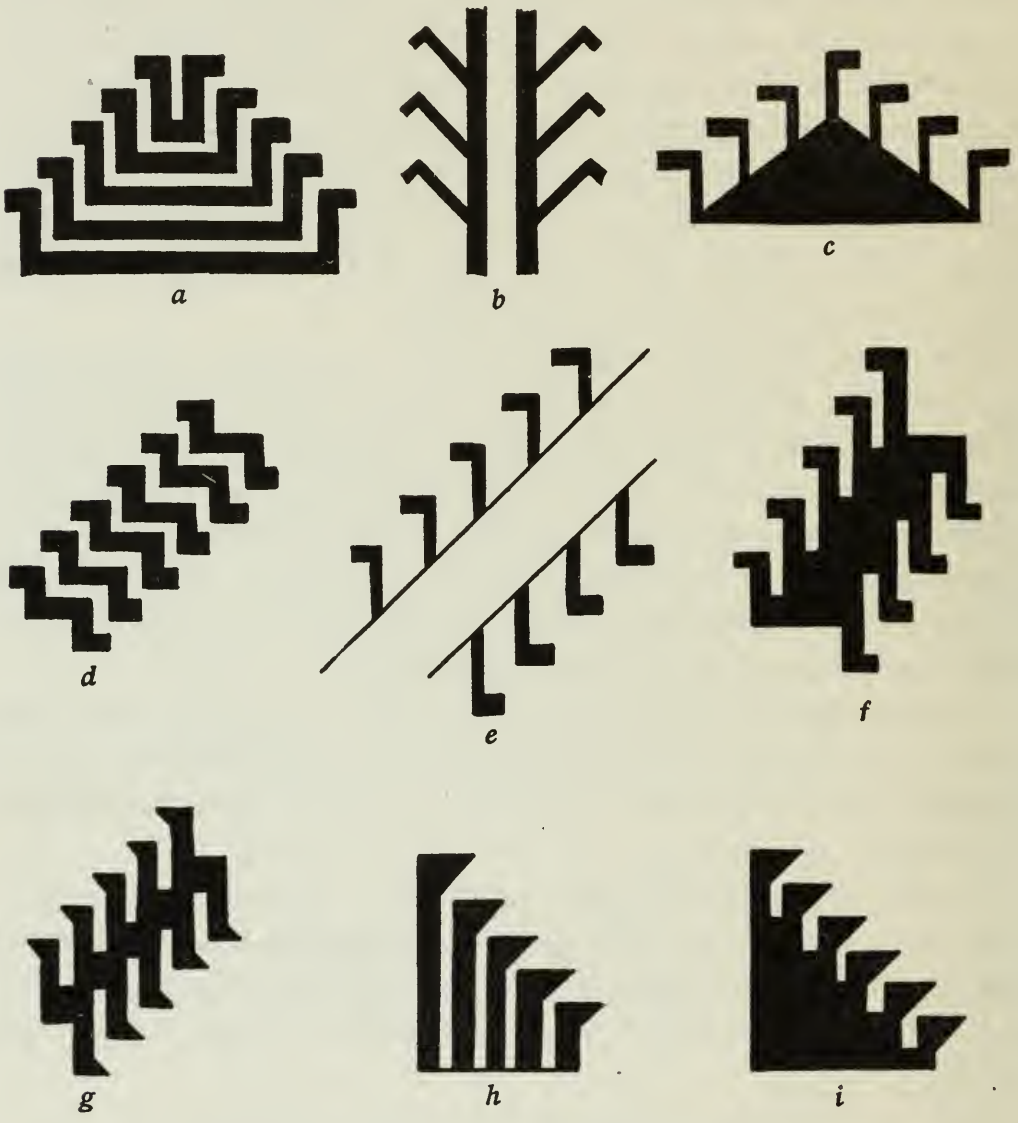

Fig. 5. Various forms of the quail tip design. *c* and *f* are Yuki.

Similarly, one gets a high positive correlation between the triangular foot type and the twined technique. This particular type of the motif is found 59 times, and all but 9 of these instances are twined. A chance expectancy would be but 22. In other words, the actual occurrence is over twice that expected on the basis of a purely casual association. This association is the more marked as there is nothing inherent in the twining process that would militate against the inverted L form of quail tip. On the other hand, it is conceivable

that a triangular foot would be less satisfactorily produced by coiling as the hypotenuse would necessarily be stepped. If the component coil were at all thick, it would be difficult to produce the characteristic small, right-angled triangle, and for this reason perhaps one would not look to coiling for the development of this form of the motif.

One further point may be made regarding the quail tip design, and this rather strengthens the case for diffusion. Disregarding for the moment the various forms of the motif, it is apparent that the design almost always occurs in association with a diagonal area or base line. This is well illustrated by Yuki specimens, where the quail plume occurs five times—twice as projections from the sides of an isosceles triangle and three times as projections from the sides of intersecting diagonals. A Huchnom Yuki specimen figured by Mason[9] has the quail tip projection from triangles which are arranged diagonally, one upon the other. The same association is found, moreover, in two baskets in the Museum[10] which are catalogued as "Yuki type" but of doubtful provenience. Both of these have the motif associated with the intersecting diagonal. A basket identical in design with these just mentioned is figured by Rogers.[11] It was found in a rock shelter near Santa Barbara and is attributed by him to the Canaliño (Chumash) culture period. Regardless of the chronology, it is interesting to know that the motif is found archaeologically and hence must be of respectable age in this area at least.

The association of the quail tip with the diagonal is not confined to the Yuki, but occurs in 152, or 94 per cent, of the 161 cases observed. A rough classification of those showing diagonal associations may be effected as follows:

Triangle	70
Intersecting diagonal	63
Diamond diagonal	5
Simple diagonal	28
Diamond	10
Other kinds of diagonal	2

This grouping is made on the basis of 152 specimens. Of this number 9 have not been included because the motif was placed horizontally or vertically or was otherwise arranged. Still other baskets, showing two or more features, have been counted more than once.

[9] *Op. cit.*, 459, USNM cat. no. 21371.

[10] Cat. nos. 1–722 and 1–2964.

[11] *Op. cit.*, pl. 70.

The combined occurrence of the intersecting diagonal and the triangle[12] is 133. Discounting the 13 baskets which show both associations and have therefore been counted each way, we have 130 baskets, or about 75 per cent of the total, showing either one or both of these traits.

Of the nine instances not included above, five are cases in which the quail plume occurs as projecting arms from a vertical panel (fig. 5*b*). These instances might fairly be counted, as the arms branch off at a 45° angle that is strongly suggestive of the typical diagonal association. Incidentally, except for a single Klikitat case, the vertical panel is confined to the southern periphery where it occurs among the Yokuts and "Tulare" (Yokuts or Western Mono).

The foregoing indicates that the quail motif is widely diffused in western North America and that it shows a marked tendency to associate itself with a diagonal area or base. This latter feature which is purely arbitrary further strengthens the case for diffusion. Many design elements are common to California and the Klikitat region, and a study of their distribution might reveal a stronger interplay between the two areas than is now apparent.

A comparative study of Southwestern Basket Maker and Californian material might prove even more interesting. Certainly Basket Maker coiled ware is more reminiscent of California than of the modern Southwest. From the Yuki viewpoint there are at least two technical similarities between the Basket Maker and Yuki wares. These are the counterclockwise progression of the coil when viewed from above and the non-interlocking character of the stitches.

The former feature is subject to some variation in California, as the Pomo[13] and most of the others[14] proceed in the opposite direction. The few Basket Maker specimens that have been described seem to be consistently counterclockwise, to judge from the statement of

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[12] It may be well to explain the term "triangle" as used in the above connection. Its use here covers not only the conventional solid form as in fig. 5*c*, but also an open-work form in which the quail plumes, by being placed in stepped series, cover a triangular area (fig. 5*a*, *h*). This is the case with many of the northwestern California specimens, and the same open character may apply to the diamonds or to the diagonals, especially in the Klikitat region.

[13] Barrett, *op. cit.*, 161.

[14] A summary of the Californian data is given by Kroeber, A. L., Ethnography of the Cahuilla Indians, UC-PAAE, 8:49, 50, 1908. A general discussion of the problem may be found in Wissler, C., AA, n.s., 16:497–501, 1914.

[15] Kidder, A. V., and Guernsey, S. J., Archaeological Explorations in Northeastern Arizona, BAE-B, 65:169, 1919.

Kidder and Guernsey[15] for the globular baskets and by the plates in Pepper[16] for the coiled plaques.

The non-interlocking of stitches is a particularly interesting point of comparison. As Kidder and Guernsey[17] have pointed out, this seems to be the distinguishing feature of Basket Maker coiling as compared with later Cliff Dweller work. It has already been noted that the Yuki baskets consistently show this non-interlocking feature regardless, incidentally, of the composition of the foundation coil.

A random selection of material from other California tribes, yields the following results. The Miwok seem consistently to interlock stitches; the Cahuilla do not; the Yokuts, generally speaking, do not, but very few of the finest specimens were examined, and two very coarse single-rod trays have interlocking stitches. Barrett gives no data for the Pomo, and in most cases the sewing is so fine that the specimen would have to be cut to determine the matter definitely. About half a dozen unfinished Pomo baskets were observed, however, none of which showed true interlocking stitches, although the stitches on the back, or wrong side, were usually split.

A superficial examination of several dozen fragments of coiled ware from Lovelock Cave, Nevada,[18] revealed both interlocking and non-interlocking stitches, the former preponderant. As the Lovelock investigators have stated,[19] the stitches are almost invariably split. The Lovelock material is interesting because of its possible relationship with Southwestern cultures.

The absence in a fair number of Californian tribes of interlocking stitches may mean one of two things. It may imply merely that interlocking is not so constant and characteristic as Mason seems to indicate.[20] On the other hand, if non-interlocking is an unusual and hence significant feature of coiling, it suggests a definite bond between the ancient Basket Makers and some modern Californian tribes.[21] Basket Maker and Californian material may be compared in one further structural feature, i.e., the composition of the coil. Less can

[16] Pepper, G. H., The Ancient Basket Makers of Southeastern Utah, Am. Mus. Journ., 2, no. 4, Suppl., 1902.

[17] *Loc. cit.*

[18] The account of this excavation is published by Loud, L. L., and Harrington, M. R., UC-PAAE, 25:1–183, 1929.

[19] Loud and Harrington, *op. cit.*, 65.

[20] *Op. cit.*, 244.

[21] Since this writing, Dr. Weltfish has published an analysis and summary of the available data on this and other points of basketry technique in AA, 32:454–495, 1930.

be said for the similarity in this case, as there is much variation in California, even on such a mediocre level as that of the Yuki. In general, however, the finest ware seems to be made on a 3-rod foundation.[22] According to Pepper,[23] all the Grand Gulch Basket Maker coiling is 3-rod, but Kidder and Guernsey[24] report 2-rod and bundle to be characteristic.

In view of a possible connection between California and the Southwest, it is well to remember that twined bags with patterns in human hair have been found in south central California.[25] They are at least superficially similar to those of Basket Maker origin. In addition, a piece of cotton cloth, identified as a Late Pueblo product,[26] was found in the same region. When quantities of haliotis shell are discovered in Southwestern excavations, intercourse between that region and the coast cannot be denied. It is merely a question of the intensity of the commerce and the period at which it obtained. At all events, the entire subject might be investigated with profit.

TWINED WARE

The collection contains 20 examples of Yuki twining, of which one is definitely, and another probably, Huchnom. As mentioned at the outset, twining is exceedingly crude, and although the coiling reaches no great aesthetic heights it far surpasses the twining in artistic appeal. The twined ware may be grouped according to use as follows:

6 hoppers.
5 seed beaters.
6 coarse, open dishes, probably sifters.
3 conical baskets, two of which are burden baskets, one flattened on one face. The third conical basket is an open-work type said to have been used in buckeye leaching.

Materials

Twining employs a great variety of materials, at least as compared with coiling. According to Miss Merrill's analysis, willow and dogwood are most frequently used for warps, although there is one

[22] *Op. cit.*, 253.

[23] *Op. cit.*, 14.

[24] *Op. cit.*, 168, and Guernsey and Kidder, Basket Maker Caves of Northeastern Arizona, PM-P, 8:59, 1921. Also Nusbaum, Kidder and Guernsey, A Basket Maker Cave in Kane County, Utah, MAIHF-INM, 29:90, 1922.

[25] Gifford, E. W., and Schenck, W. Egbert, Archaeology of the Southern San Joaquin Valley, California, UC-PAAE, 23:102, 1926.

[26] *Idem*, 104.

instance of the use of redbud. For the weft one gets willow, conifer root, and willow bark in order of their frequency, and, in addition, there is one instance each of digger pine, willow bark, willow bark and sapwood, willow and grape, and one doubtful instance of redbud root and shoots.

Few of the twined baskets have any decoration, and such patterns as occur are produced by willow bark, redbud bark, redbud, and squaw grass. All the hoppers have a heavy willow hoop lashed about the inside of the upper rim, and four of the six hoppers have, in addition, a willow hoop whipped on the outside, several inches above the bottom. These willow hoops are usually attached by lashings of thong, grape, or, in one instance, willow. Two of the conical baskets have reinforcing willow hoops attached inside the upper rim by thongs in blanket stitching. This method is well illustrated in plate 125*h*. One of the sifters (pl. 126*e*) has a hoop twined about the outside rim which is, of course, a lattice twine.

Initial Arrangement of Warps

In starting the twined work, it is usual for two sets of warps to be crossed in pairs. In one basket, however, the sets contain three stems; and in another, four stems. In one instance there seems to be three rather than two sets of stems, each composed of one, two, and three stems respectively. This may have been intended as two pairs of three stems each, with one of the elements slightly out of place. A number of the baskets have the initial warps indeterminately arranged, and with the two conical burden baskets the start is covered by a protective cap of hide, for which reason the warp arrangement could not be determined. After the start new warps were inserted singly as needed.

It is, of course, impossible to say anything of the initial warp pattern of the hoppers since by definition they consist of sides alone. Beyond doubt, however, the hoppers were definitely designed as such and were not worn-out baskets put to a secondary use. This is indicated by two facts. In the first place, with the exception of the two burden baskets the hopper is the only article made in closed twine stitch, for the beaters and sifters are essentially loose, open affairs. Secondly, the twined hoppers always have several rows of 3-strand twine near the lower edge—presumably as a strengthening agent.

Furthermore, if the mortar baskets were merely worn-out specimens, it is remarkable that worn-out coiled baskets were not put to similar use. Yet the fact is that, when the bottom of a coiled receptacle wore out, the Yuki generally replaced it with a patch of twined ware (pl. 122*f*) or a new coiled bottom. To be sure, one of the two bottomless coiled specimens in the collection is said to have served originally as a parching basket used subsequently with a pounding slab, i.e., after the wearing out of the bottom. But this seems to be exceptional, and, at least with twined ware, the ordinary basket sifter is totally unsuited for service as a hopper.

Kinds of Twine

Most of the Yuki ware is simple, 2-strand twine, but there are examples of 3-strand and even of lattice twine. There are one or two instances of double warps, but no cases of diagonal twine or of wrapped twine.

The seed beaters and sifters are of simple twine. The former have stem warps and flat wefts. The handle consists of a bunch of small twigs or stems thrust through the body of the beater, bent back upon itself, and tied. The only sifter not made entirely of simple twine is the one mentioned above. It has a single row of lattice twine, by means of which a willow hoop is attached about the upper outside rim.

The small conical leaching basket is the only specimen made entirely in 3-strand technique. This basket (pl. 126*c*) is further noteworthy as the only case in which the weft elements are not flat or splint-like. The bottom is closed work, but the sides are open with parallel, not crossed, warps. There are no instances of diagonal warps.

One of the two burden baskets is simple twine; the other starts with 3-strand, changes to plain twine for two rows, then reverts to 3-strand for four rows. The balance is plain twine until the last row, which is again 3-strand.

Four of the six hoppers are predominantly 2-strand but with one or two rows of 3-strand near the bottom, just above the characteristic willow hoop (pl. 125*g*). The 3-strand technique may be employed for a few rows again halfway up the side, and, more rarely, again at the top. The function of the 3-strand technique seems to be fundamentally one of strengthening, with a secondary use as decoration. The introduction of a few courses of 3-strand with its characteristic ridge

makes a pleasant break in the otherwise monotonous and normally undecorated surface (pl. 125*g*).

Lattice twine differs from plain twine in that there is a stationary weft in addition to the two mobile ones. There are two instances of lattice twine in the Yuki collection, both attributed to the Huchnom. As the technique is not characteristic of any group outside of the Pomo, its presence among the Huchnom is undoubtedly due to Pomo influence. In one hopper the whole specimen is of lattice work save the three top rows, which are of simple twine. Incidentally, with one notable exception to be mentioned later, this particular hopper (pl. 127*d*) is the only twined specimen with any attempt at a pretentious surface design. The other Huchnom hopper has plain and lattice twine interspersed, much as is customary with the plain and the 3-strand. That is, the bulk of the hopper is plain, but with several rows of lattice work halfway up the side and again at the top.

Progression of Twine

Yuki twining, like coiling, is clockwise when viewed from the exterior bottom. It is, furthermore, to follow Barrett's definition,[27] an upward twine. To this there are three exceptions, namely, the flattened, plain twine burden basket and the two Huchnom lattice twine hoppers.

The former follows the typical Yuki progression pattern, but the strands are turned downward as with the Pomo. Of the two lattice twine hoppers, one is fragmentary, and it is not possible to determine which way the twining proceeds. If it is clockwise, the twining is downward, and vice versa. In either case it has one non-typical Yukian feature: the other hopper is complete and is clockwise from the outside bottom, with the wefts turned downward. It is well known that lattice twine is confined almost exclusively to the Pomo, and Barrett's[28] statement that Pomo women twined in clockwise rotation, turning the wefts downward, clinches the case for Pomo influence. Indeed, it seems more than likely that these two lattice twined specimens came from Pomo women who married into the Huchnom tribe.

[27] *Op. cit.*, 147.

[28] *Idem.*

Rim Finish of Twined Work

There are several different methods of finishing the rim. Four of the five beaters have the top row overcast, but with most of the twined specimens there is little evidence of a special finish (pl. 126*b*, *c*). The warp stems are generally cut close, and often a willow hoop is then lashed about the top.

There are three instances, however, in which the warp strands have been specially treated. In a loosely twined flat dish (pl. 127*c*), the warps are turned down on the outside and tucked into the last row, three to four stitches distant. In another basket of similar shape, the warps are turned over and tucked under the last row, three stitches distant. They are once more tucked through, three or four rows below the top. With a third basket dish the warp strands have been twined about the top.

Twined Decoration

With two outstanding exceptions, the decorative attempts on twined ware are noticeably feeble. They are confined to one or two rows of brown weft on the side or near the top. One basket has the bottom of brown and also three rows of the same near the top; another has a more pretentious arrangement, consisting of two rows of alternate brown and cream stitches. This, however, is the entire range of twined decoration except for the two specimens to be mentioned below.

The first of these, shown in plate 125*h*, is a twined burden basket with an intricate all-over pattern of squaw grass (*Xerophyllum tenax*) on conifer root background. The design is produced by overlay. The whole—from the materials and technique to the design—impresses one as definitely non-Yukian and as northwestern.

The other piece of highly decorated twine has been mentioned above. It is one of the two Huchnom lattice hoppers and has horizontal rows of redbud bark with small rectangular fillers (pl. 127*d*). Technique alone would mark this specimen as the result of Pomo influence if not an outright Pomo product.

SUMMARY

The Yuki manufactured both coiled and twined baskets—the former usually decorated, the latter ordinarily undecorated.

Twining was used principally for seed beaters, sifters, and hoppers. The latter are of better and finer workmanship than the other two. The twining is 2-strand, 3-strand, and lattice, the latter undoubtedly a Pomo intrusion. There are no examples of diagonal twine, wrapped twine, or of open twine with crossed warps. Yuki twining is clockwise from the exterior bottom, and the wefts are turned downward.

Yuki coiled baskets, used principally as food containers, are usually of 1-rod and bundle or of 3-rod foundation. The coil runs counterclockwise as viewed from above. Yuki decoration is supremely nondistinctive—it shares the general fund of North Californian design elements. At least one of these elements, namely the quail tip, is of extra-Californian distribution, as it is found with marked concentration in the Klikitat region.

As a general thing Yuki basketry, although not unpleasing, is unimpressive and mediocre by Pomo or even Maidu standards.

EXPLANATION OF PLATES

In plates 120–125, baskets are viewed from the side or from the bottom; in plates 126 and 127, baskets are viewed from the side or from above.

Museum numbers refer to catalogue 1.

Plate 120. *a*, 11962, diameter 16 in., others on same scale; *b*, 11963; *c*, 12002; *d*, 11982.

Plate. 121. *a*, 12043; *b*, 12052; *c*, 11995; *d*, 11932; *e*, 11997; *f*, 11882, diameter 12 in., others on same scale.

Plate 122. *a*, 12037; *b*, 12039; *c*, 11996; *d*, 12007, diameter 17 in., others on same scale; *e*, 11938; *f*, 11931.

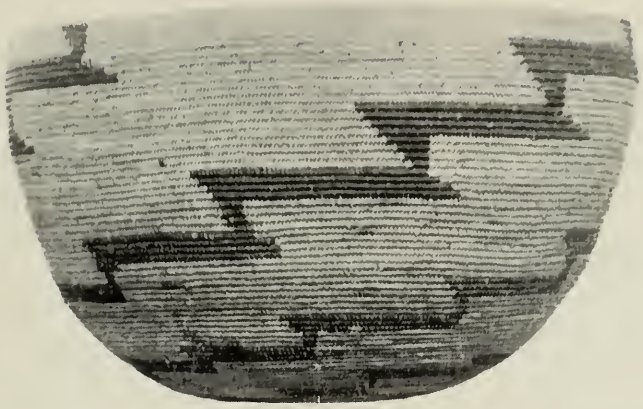
Plate 123. *a*, 12042, diameter 10 in., others on same scale; *b*, 12038; *c*, 11922; *d*, 11880; *e*, 12008; *f*, 513.

Plate 124. *a*, 11960; *b*, 12023; *c*, 11993; *d*, 12025; *e*, 12040, height 6 in., others on same scale; *f*, 12026; *g*, 11877; *h*, 12041.

Plate 125. *a*, 11929; *b*, 11989; *c*, 11885; *d*, 12044; *e*, 11983, height 6½in., others except *h* on same scale; *f*, 12005; *g*, 11896; *h*, 9575, diameter 19 in.

Plate 126. *a*, 12024; *b*, 11901; *c*, 11990; *d*, 11994; *e*, 12020; *f*, 12016; *g*, 11889; *h*, 12019, diameter 16¾ in., others on same scale.

Plate 127. *a*, 11892; *b*, 11968; *c*, 11977; *d*, 15056, diameter 19 in., others on same scale.



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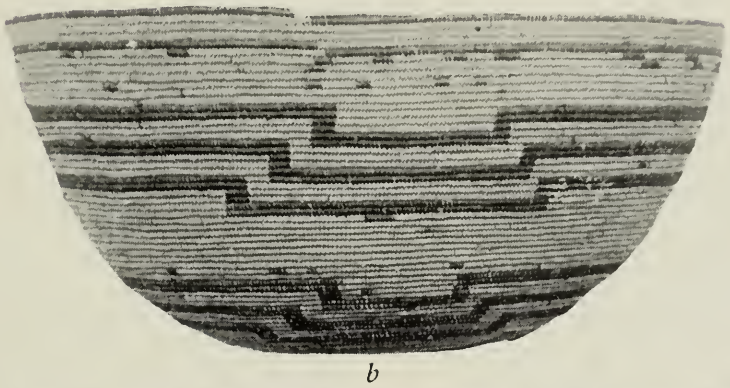

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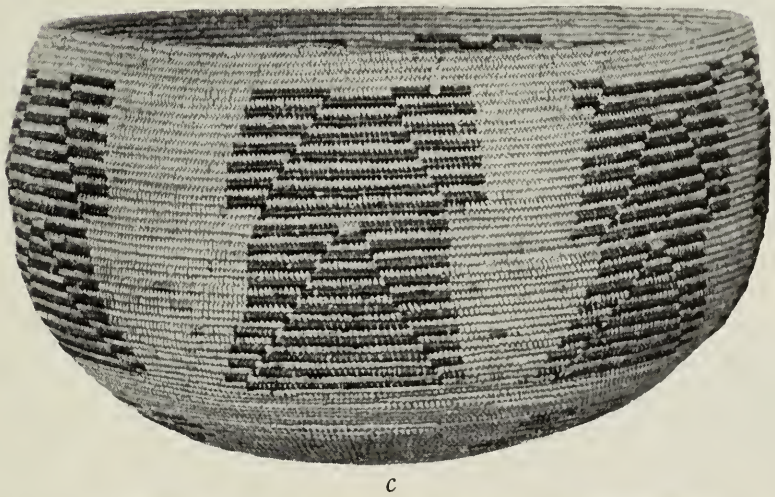

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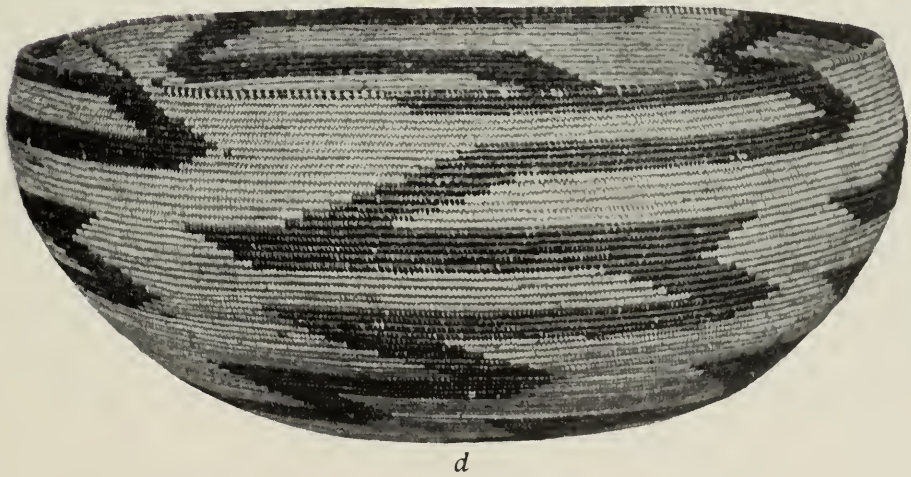

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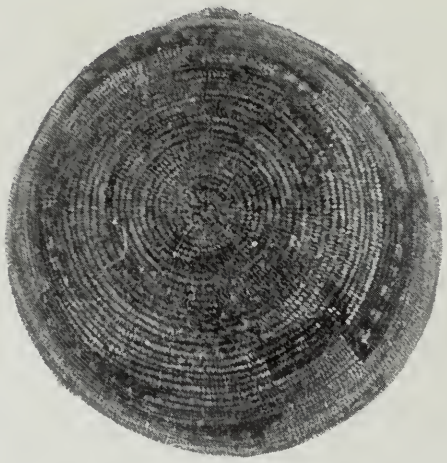
COILED WARE



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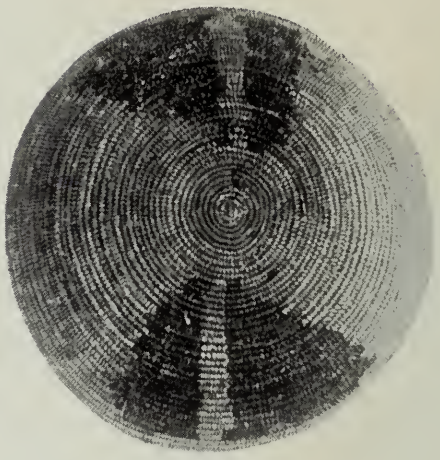

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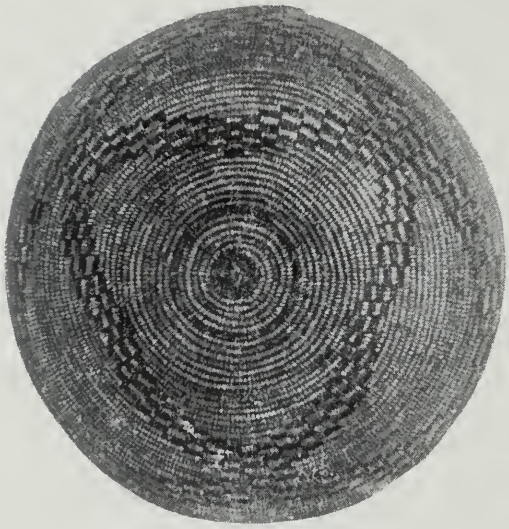

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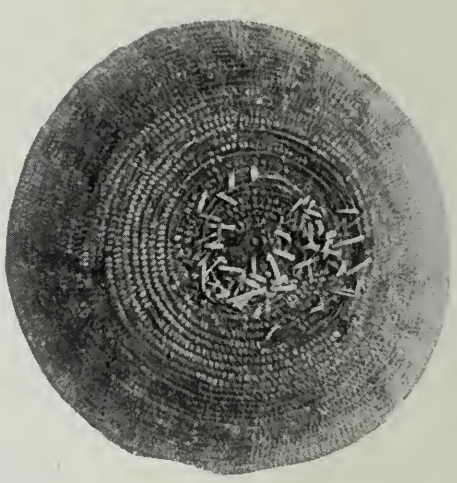

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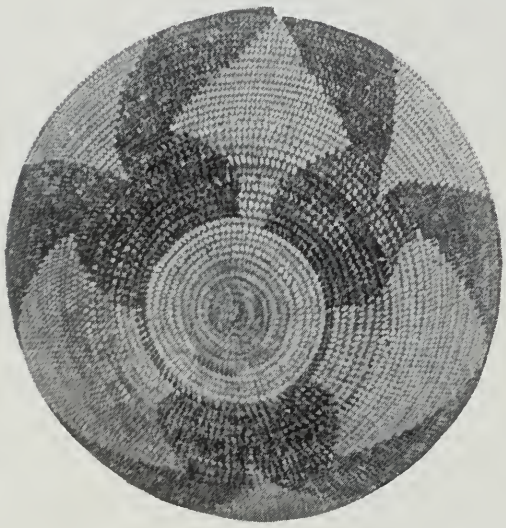

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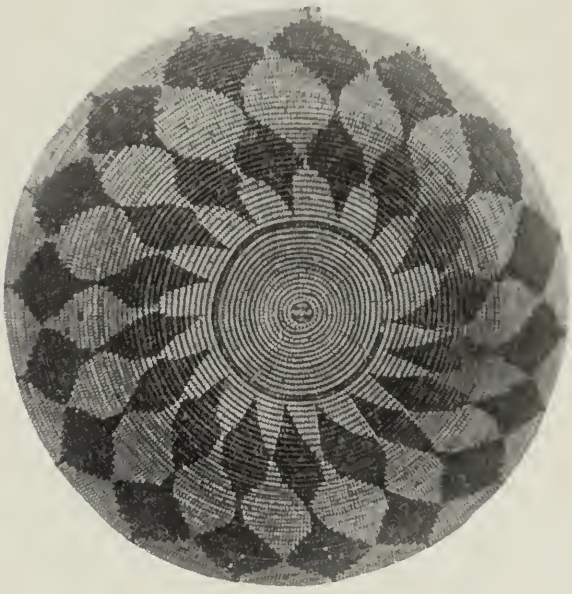

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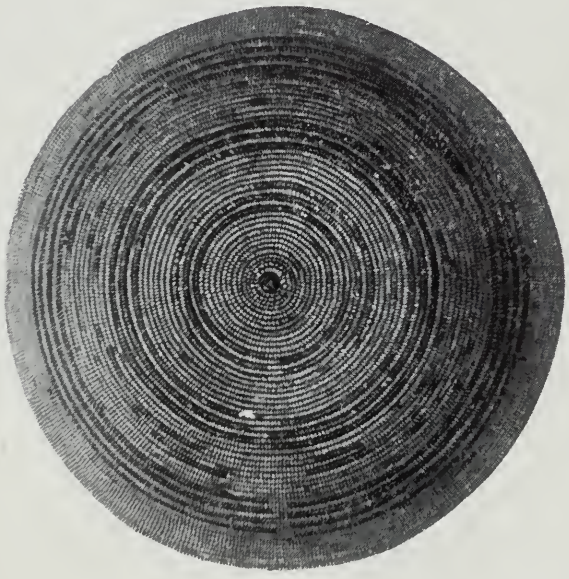

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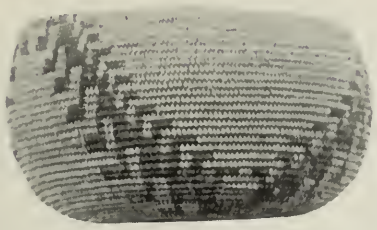

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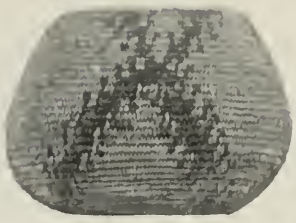

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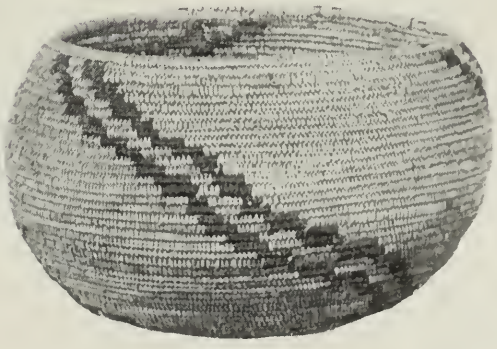

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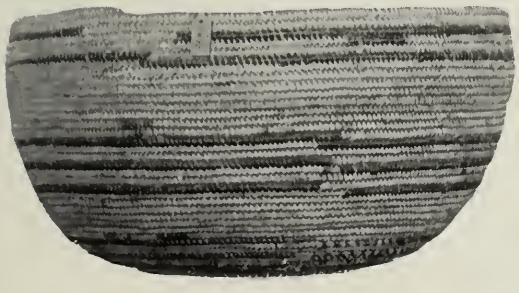

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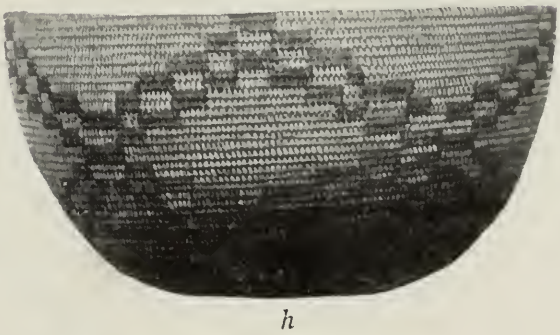

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COILED WARE

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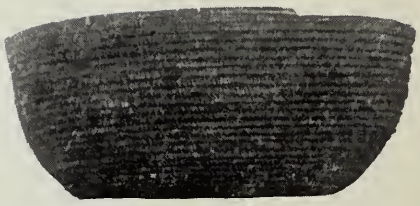

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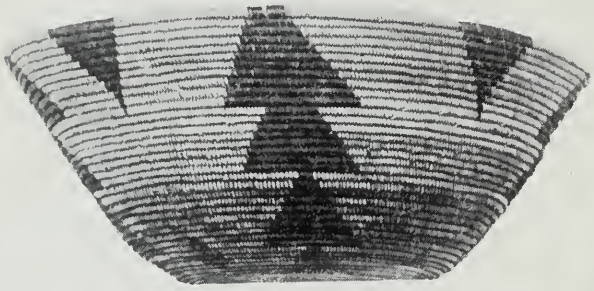

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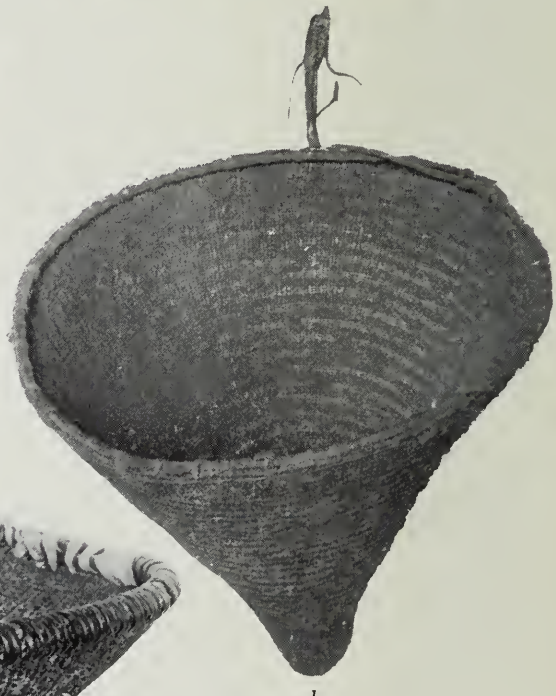

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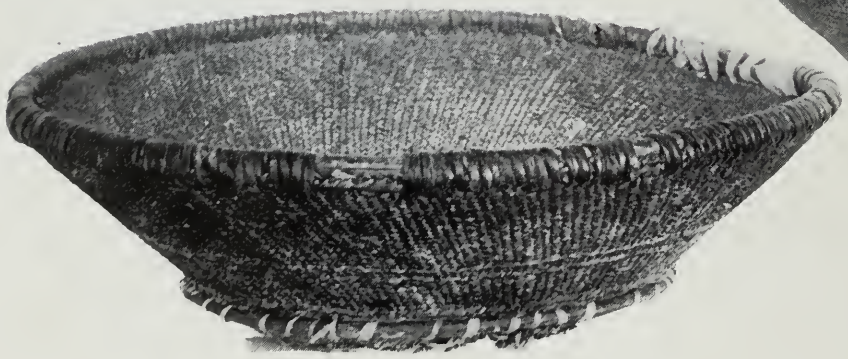

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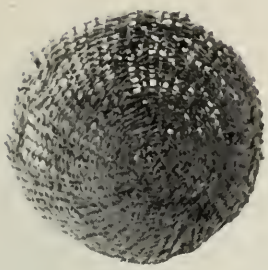
COILED WARE; TWINED WARE



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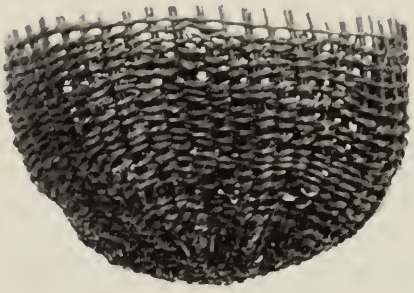

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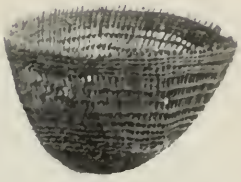

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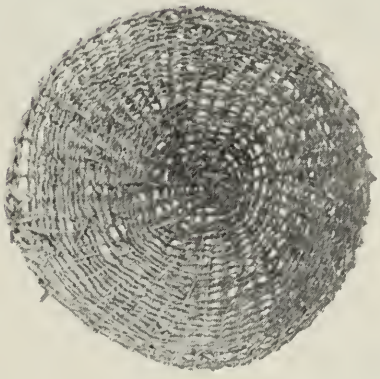

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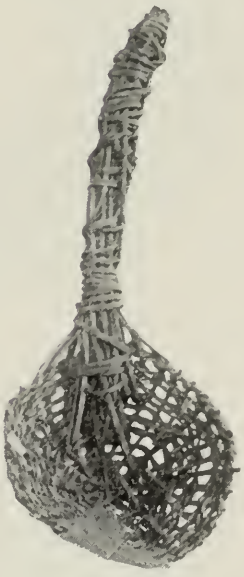

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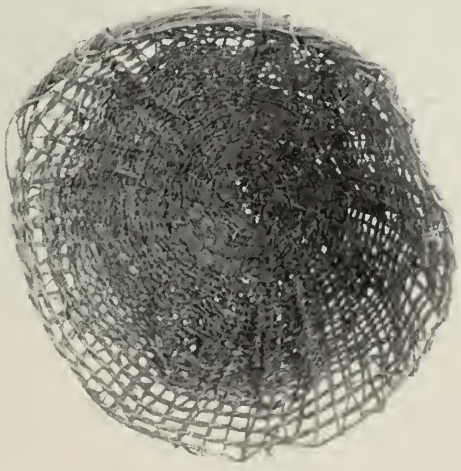

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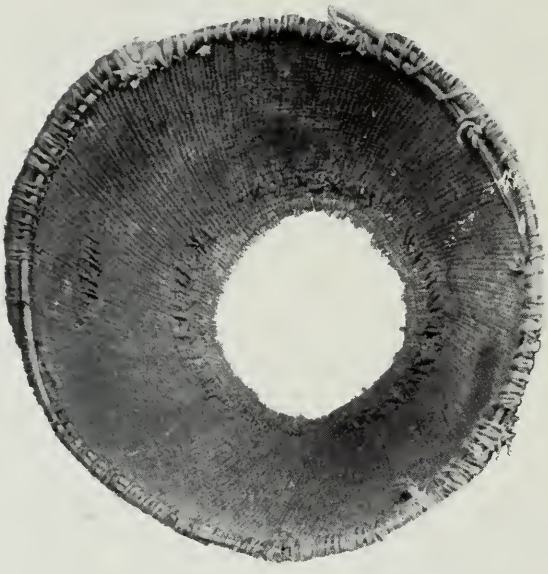
TWINED WARE



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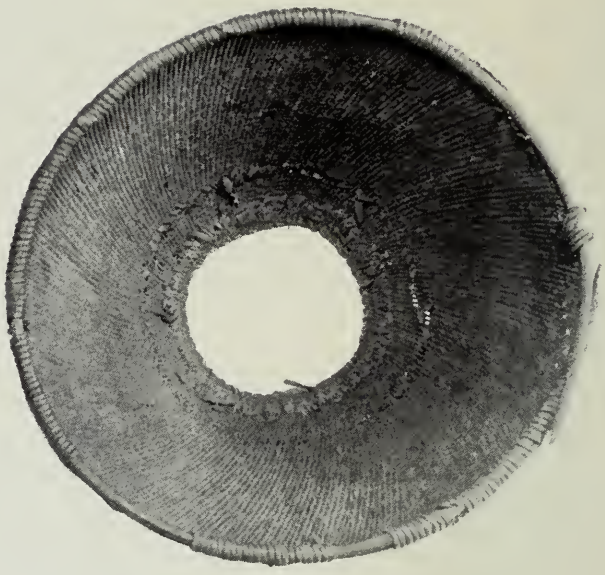

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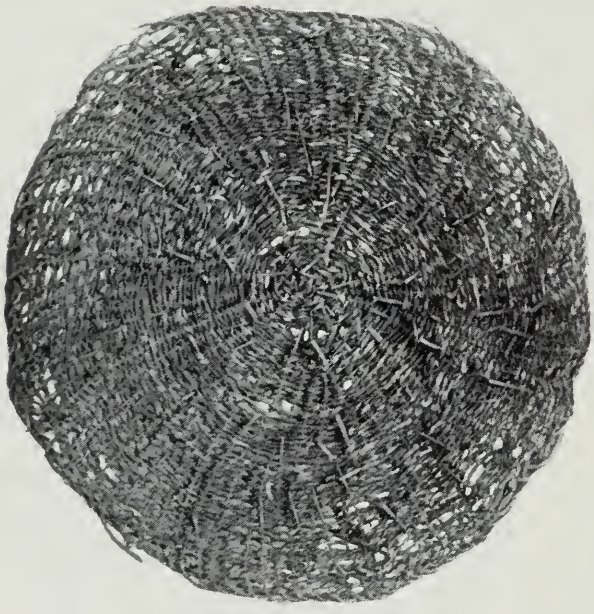

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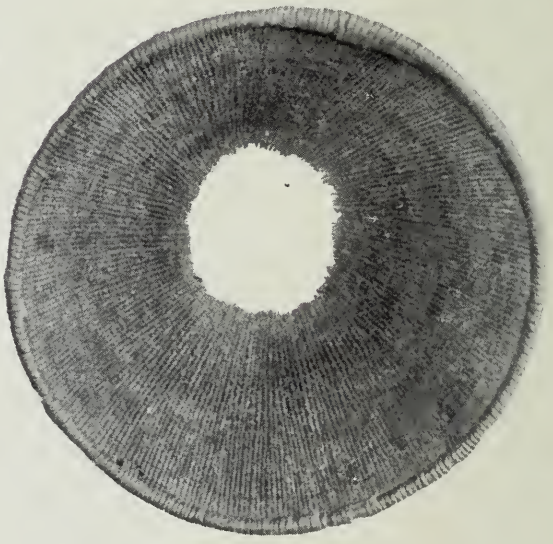

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